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COGNITIVE DEVELOPMENT THROUGH ART EDUCATION

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TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

INTRODUCTION

This dissertation investigates the cognitive development that is possible through Art education. It is directed towards Secondary level education and uses the recently developed Junior Certificate: Art, Craft and Design, Syllabus for reference.

Chapter 1 explores the situation of Art education in the past and how it has been seen as an occupational subject, rather than an educational subject.

Chapter 2 deals with the recent situation of Art education in Ireland. I have discussed the rationale for change in Art education which has led to the emergence of the new Junior Syllabus for Art, Craft and Design.

In Chapter 3 I have analysed the Junior Certificate programme in terms of educational objectives, primarily cognition. This is analysed further in terms of cognitive objectives, from knowledge, understanding, application, analysis and synthesis. I have emphasised that the Junior Certificate: Art, Craft and Design syllabus may be applied to all levels of Secondary school education.

In Chapter 4 I have deliberately selected lesson plans from two different disciplines; collage and fabric print design. This is to demonstrate that, in all disciplines of Art education, there is a high potential for cognitive development.

Lesson plans have been included in the Appendices.

CHAPTER 1

MISCONCEPTIONS

Dissolving Misconceptions that Art, Craft, and Design Education is only an Intuitive Expressive Activity.

"When Art education is promoted as providing unique educational benefits, it can easily be dismissed as frivolous. When Art is presented as a structured subject matter, it gains educational legitimacy". (1)

The general attitude to Art, still in the present day, is that it has "affective and psychomotor benefits" only. And that it is good for pupils to have an area where they can express themselves; that it develops their creativity, improves dexterity, and that they can relax in this class. All these benefits are valid. but as aims they are vague. Because of this they are difficult to analyse, and therefore they lack educational credibility. In order to understand why Art education has taken nearly a century to gain respect and credibility, it is important to look back at the history of Art education.

During the 19th Century there was a utilitarian approach to Art. Structure in Art education was devoid of thinking and problem solving. Educational aims were psychomotor based i.e. drawing skills, which involved "copying" from other 2-dimensional sources. Extrinsic aims were to produce a more efficient work force.

> You should endeavour to disabuse persons of the notion that the kind of drawing which has been hitherto known as an accomplishment in schools for the rich, is that which would be taught under the present minute of the schools for the poor. The kind of drawing which is proposed to teach is in the strictest sense an education of *the eye* and of *the hand*, such as may be the first step in the career of the great artist but must at any rate enable the common work man to do his work better. (2)

This quotation emphasises the notion that Art education was not valued in terms of intellectual gravity, and that it possessed virtually no value to anyone contemplating higher education. The educational requirements for Art education included the following: an ability in drawing; an ability to render outline and tone; the representation of objects with precision and accuracy; an ability to draw straight and curved lines; and above all the ability to copy.

The methodology of this teaching was the copying of 2-dimensional images drawn by the teacher, and the imitating of patterns based on geometric structures. A typical mid-19th Century European book used in Art education was *Johannes Rauhausse's manual Xeichnungslehre (1821).* This book included lessons in line (curved / straight), light / shade and the copying of form. This method of Art education perpetuated the notion that Art was a non-intellectual activity. This, in turn, repressed the value of Fine Art in relation to Art education until the 20th Century. (In a present day context it is hard to imagine how Fine Art is not valued as a reference for Art education).

Artists in the past have struggled for their existence. From the 19th Century, Art evolved dramatically with movement upon movement, for example, Romanticism, Symbolism, Impressionism, 20th Century Expressionism, Cubism. It was the repercussions of early 20th Century Art movements, and the fascination of

primitive Art, which eventually led to a change of approach to the Art education curriculum in Europe.

At the beginning of the 20th Century, Emile Rousseau's theories of naturalism had caught and held the imagination of many educationalists and teachers in England and Europe. (3) Educationalists, such as Froebel, Viola, and Cizek, were influenced by these theories and celebrated the specific value of spontaneous child art. Of these, Franz Cizek was the most influential on Marion Richardson, an English educationalist.

Richardson had taught at the Dudley High School in 1920-1930. After seeing exhibitions of Cizek's work with children, she developed a new approach to Art education in England. Cizek had emphasised the importance of encouraging and developing creativity before imposing regimental techniques. This was an important discovery and coincided with a movement towards child-centred education. curriculum planning became child-centred.

Stuart McDonald, in his History of Art Education, 1970 (4), makes the point that the recognition of Child Art depended upon an increased interest in modern painting, primitive art and psychology. Marion Richardson believed the most important influence was the development of modern painting. The Impressionists, Cubists, Naivists, Expressionists were all revolutionary in breaking away from the academic tradition. What is evident in the works of these Artists is the placing of equal value on both the work of Art produced and the *process* of the Artist. This in turn was used in an educational context by Marion

Richardson. She emphasised the importance of the imagination and creativity of the child, rather than the copying of 2-dimensional images. (5)

However, in Ireland, after the formation of the free state, the Irish language became one of the most important curriculum subjects besides the three "R"s; reading, 'riting and 'rithmetic. .There was no great scope for Art in the time-table. It's purpose, if examined, was nebulous and unnecessary. While in England and Europe Art education progressively moved to a more structured programme, in Ireland the subject remained very much limited to the hand and the eye. The Art class consisted merely of copying of objects, without creativity or analysis.

The Thinking Process Relating to Fine Art

Fine Art and Art education are interlinked. The discovery of new Art movements and thought processes behind Art works influenced the structure of Art education in schools. This is evident in the work of educationalists, Cizek and Richardson, in England and Europe during the earlier part of this century.

As I mentioned before, the fascination in primitive Art by earlier 20th century artists had a dynamic influence on Art education in Europe. It is through the analysis of the process of painting that we can reveal the thinking that has gone into a work of Art.

In a Fine Art context, when an artist selects a site for one of his or her landscapes, s/he not only selects and rearranges what s/he finds, but s/he must

re-organise the whole visible matter. Through this analytical process the Artist rediscovers and re-interprets the subject matter. A good simple example of this would be the landscapes of Paul Cezanne, the 19th century Impressionist, also known as "the father of modern Art". Due to his deconstruction and reconstruction of the landscape into cones, cylinders and cubes, he created a new way of observing form. (6) See Figure 1. Rock Scenery in Provence by Cezanne, 1886.

Picasso pushed Cezanne's concept of rebuilding and analysing planes of structures into a new innovative whole. This was called Cubism. He would show the viewer all aspects of a scene on the pictorial plane, for example, Violin and Grapes; see Figure 2. This thinking process, which is behind the Art work of Picasso and Cezanne, is very similar to results of Arnheims investigations discussed later in this chapter. (Rudolph Arnheim, professor of psychology of Art at Harvard, performed psychological studies of the forms and functions of art).

The painter in the landscape will view selectively, and manipulate elements, because his/her perception is highly developed and has the ability to understand and interpret what is there. (7) The cognitive feat involved in such a process consists of rejecting the wholeness of a shape as it presents itself and in re-interpreting it as a larger and structurally better whole.

Such a process is often long and complex. (8) The viewer of the painting, in turn, examines the work, exploring, trying to orientate themselves to some anchor, looking for accents. The viewer experiments with a tentative mental framework in order to see whether it fits the total content of the Art work. On

Figure 1: P. Cezanne: Rocky Scenery in Provence, 1886. London Municipal Gallery.

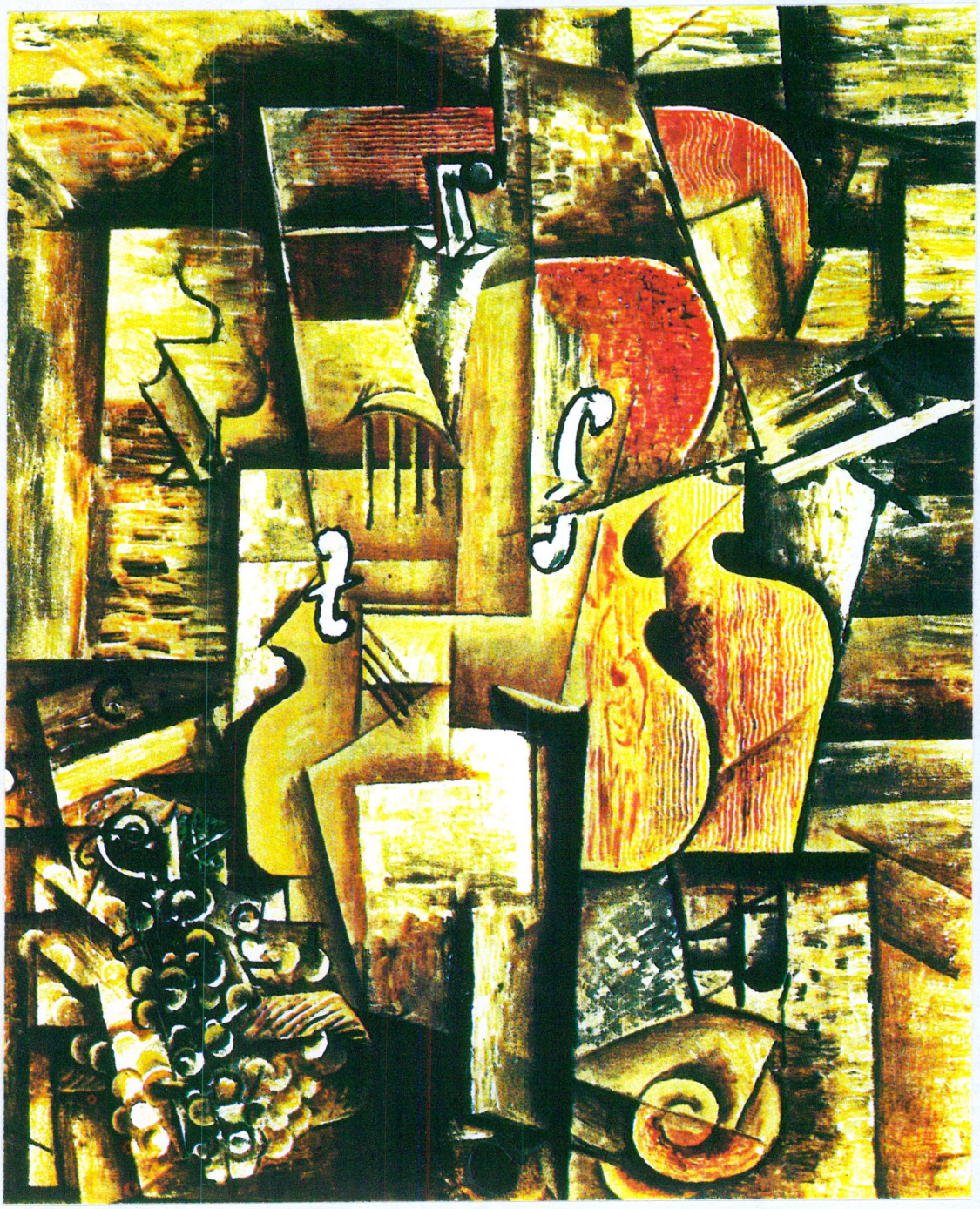

Figure 2: P. Picasso: Violin and Grapes, 1912. New York Museum of Modern Art.

successful completion of this exploration and analysis the work becomes a more congenial structure. This may illuminate to reveal more insight.

The subject matter can be transformed into a complex arrangement of symbol systems. An example of this would be Piet Mondrian's Broadway Boogie Woogie; See Figure 3. Based on New Yorks Broadway, it focuses on the subjects essence, the repetitive rhythms of the hustle and bustle of New York life. This is contained in the geometric structures which are rigidly horizontal and vertical echoing the grid pattern of New Yorks streets.

Completing the Incomplete

Objects are often perceived as 3-dimensionally complete although only a frontal part of their surface is visible. What happens here is that the beholder completes the non-visual knowledge from the fragment he actually sees. For example, a cylindrical pot is seen as a complete all-round object. An incomplete cylinder looks quite different. Here again, invisible parts of the object supplement the visible parts through knowledge and understanding.

The following examples of tests by Arnheim show the strong relationship between perception and cognition.

- A box partly covered by a flower-pot is seen as a complete cube partly hidden. This means that perception doesn't restrict itself to what is visible, but records extensions as an additional part of the visible.

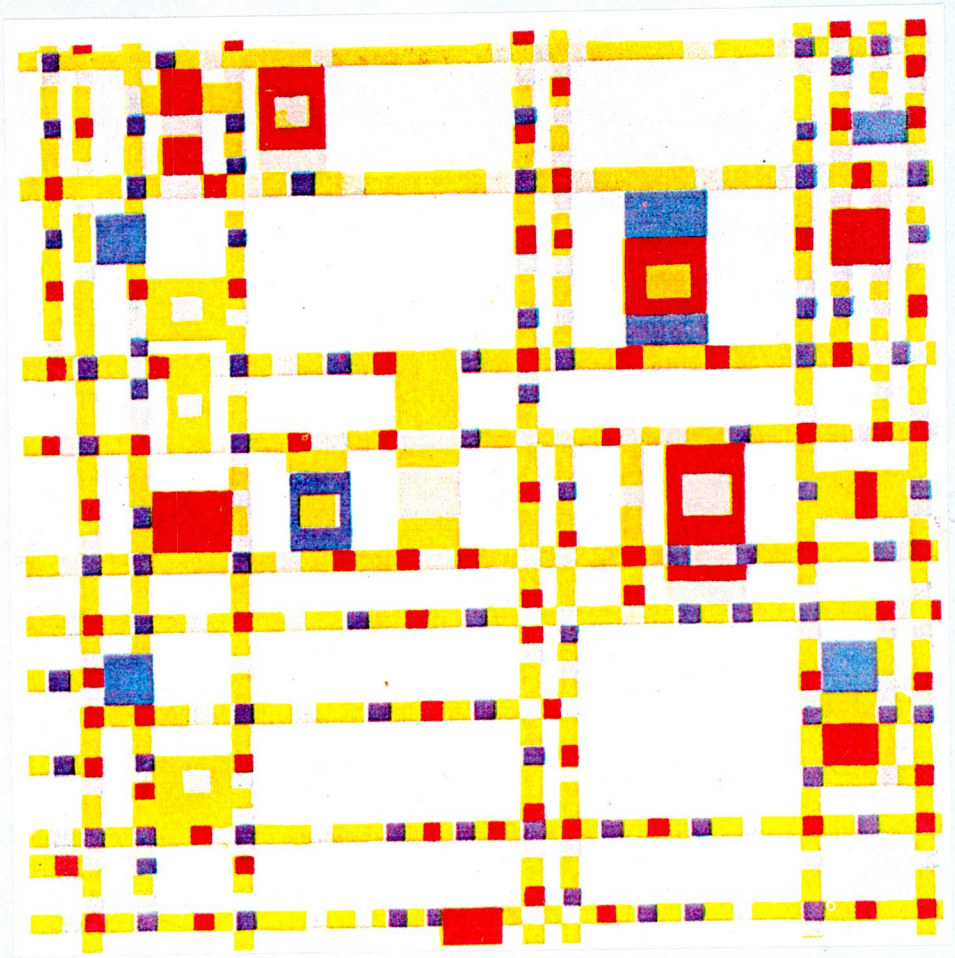

Figure 3. P. Mondrian: Broadway Boogie Woogie, 1942-3. New York Museum of Modern Art.

- Another situation was evident in test on children's drawing, particularly around the age of 10 years. When given a cube to draw, even if they cannot see certain aspects of the cube, for example the back or left-hand side, they will still attempt to record this information because they have the understanding that those sides are there. (9)

This proves that the cognitive feat involved in such a process consists of rejecting the wholeness of the shape as it presents itself, and in re-interpreting it as a larger and more complete whole.

Footnotes Chapter 1.

1. E. Eisner, "Structure and Magic in Discipline-Based Art Education", in Critical Studies in Art Education, ed. D. Thistlewood (Longman, U.K.) p.16.

2. R. Morris, "Towards a Shared Symbolic Order", in Living Powers, The Arts in Education, ed. P. Abbs (The Falmer Press, East Sussex, U.K., 1987) p.183.

3. Ibid, . p. 184.

4. Ibid, . p. 187.

5. Ibid, . p. 187.

6. N. Lynton. The Story of Modern Art (Phaidon, U.K., 1980) p.23.

7. R. Arnheim, Visual Thinking (University of California Press, Berkley, Los Angeles, 1969) p.35.

8. Ibid, . p.34.

9. Ibid, . p.34.

CHAPTER 2

ART EDUCATION IN OUR SCHOOLS

The Past

Up to 1991, objectives for the Intermediate Certificate Syllabus have strongly emphasised the end product of the Art Examination. The exam was divided into three parts: Still Life; Imaginative Composition; Craft or Design. Due to the nature of the examination, i.e. restricted time and choices of subject matter which were released at the time of the examination only, little time for exploration was allowed. In my opinion, the main aim of the exam was to produce a pleasing end-product, whether it was Still-Life, Imaginative Composition or Craft and Design. Emphasis on creative and inventive thinking was kept to a minimum.

Clodagh Houlihan says that :

> When the noble aspirations of the Intermediate Syllabus were translated down to the Art room practice, Art education frequently was as much a matter of studying past examination papers and cramming in facts, as was the practice in the most academic of subjects. (1)

Houlihan continues to state that Art education, in comparison to other subjects on the curriculum, was subordinate and was not "seen as a serious subject, but as an easy option for the less bright, involving no real learning". This sometimes necessitated a degree of tolerance for the mess caused when the use of paint was required. (2)

In the Rules and Programmes for Secondary Schools (3) 1987/1988 to 1990/1991 (3) a small paragraph is written about the Intermediate Certificate Art

examination, but the information is very vague. There are no aims mentioned. Words such as 'pleasing' are used to describe requirements: "Objects and groups of objects, pleasing in colour, texture and form". (4) The only section where specific words are used is in the design section: "Design - the free invention of pattern in colour. The planning of a design to be carried out in some specific craft." (5) This is the only brief relating to the examination which implies that there is a thinking process going on before the final examination piece is realised. The Leaving Certificate examination is similar in that the entire exam is supervised. The examination questions are not known until the examination commences, with the exception of the imaginative composition/still life

In 1985, the Curriculum and Examinations Board published a discussion paper which examined the current situation of the Arts: Music, Dance, Drama and the Visual Arts in Schools. The purpose of this discussion was to state recommendations for change in Arts provision and curricula at first and second levels. (6) This process was essential to examine the past and present situation in Arts in education.

Curriculum Change Primarily in Relation to the Junior Certificate

Art Craft and Design Syllabus

Rationale for the Arts in Irish Education

Extrinsic arguments for Arts in education appear to justify to the Irish education system, and general public, the value of Arts in education in terms of

- Industry,
- Employment in galleries, museums, libraries and media,
- Tourism - music, literature and theatrical productions,
- Leisure - the arts promote the engagement by people in activities that are more enjoyable and educational.

It is the intrinsic arguments for Arts in education that explore the intellectual and creative benefits of Arts education. It is only when the value of "the Arts as distinctive forms of knowing" (7) are recognised and understood that they will be given priority in education, both primary and secondary.

In the Irish education system it is mainly dominated by the numerical and literal symbols. (8) Many other symbols systems exist, yet the numerical and the literal take up the greatest part of the education system. This implies that the pupil is only exploring two aspects of society. These are important and necessary aspects, but without visual, musical, dance and poetic integration, the education of the individual is unbalanced. What takes away from the credibility of the latter

disciplines is that they are separated from educational thinking and are put under nebulous categories such as 'expression'.

> The focus on the symbol as a key term in this rationale is intended to avoid the false dichotomy of thinking and feeling, of cognition and affectivity. But it must be emphasised that symbol as used here, presupposes that all the sensitivity and responsiveness of the organism participate in the invention and interpretation of symbols. (9)

In the visual Arts rationale it is mentioned that visual arts education relies more on the active involvement of the student rather than on the passive receiving of an existing body of subject matter. (10) Visual thinking and curiosity are developed through sight (visual perception), touch (sensitivity and dexterity), light (tone, colour and form), space (shape, form and location) and an interaction with the mastery of diverse materials of the visual arts. The visual arts differ from many other school subjects in that they do not seek to provide ready made answers, but to equip students with ways of working, to identify problems, but to arrive at their own answers at their own pace. "The mind is not a passive receptacle, but it is active, it participates and constructs. The structure of art is complex, with all the elements, the elements are the components of the language through Art." (11)

It is through the setting up of a situation or project where the pupils, not only understand the Art element, but they can understand the levels involved in manipulating shape, composition and ideas for communication, in painting, design or craft. The process of Art education is layered, not simplistic expression, or just a drawing activity. A secondary school program needs a structured framework which also gives freedom for the pupils to understand,

manipulate and invent through the visual symbols of Art. This is how Art can develop cognition. Without the balance of structure and freedom, the pupil will not have the opportunity to problem solve and create.

Eisner states

> For experience to have educational significance, the individual should develop from it the ability to copy intelligently, with the problems which he will invariably encounter in the world. For Art educators it is the Arts, and the visual Arts in particular, which provide the occasions for these problems. Programs of Art education that have a significant educational field for children enable them to think more intelligently about Art and it's various manifestations in the world. (12)

Footnotes Chapter 2.

1. C. Houlihan, "A Teachers Perspective ", in The Changing Curriculum ed. T. Crooks (O'Brien Educational, Dublin, 1989) p.31.

2. Ibid, . p. 31.

3. Rules and Programmes for Secondary Schools. (An Roinn Oideachais, Dublin) p.

4. Ibid, . p.

5. Ibid., . p

6. The Arts in Education (The Curriculum and Examination Board, Dublin, 1985) p.4.

7. Ibid, . p.6.

8. Ibid, . p.6.

9. Ibid, . p.6.

10. Ibid, . p.16.

11. A.W. Levi, and R.A. Smith, Art Education, A Critical Necessity, (University of Illinois Press, U.S.A., 1991) p.187.

12. E. Eisner, Educating Artistic Vision, (Stanford University, Macmillan, New York, 1972) p.17.

CHAPTER 3

ANALYSIS OF THE JUNIOR CERTIFICATE: ART, CRAFT AND DESIGN SYLLABUS

The Junior Certificate: Art, Craft and Design programme is the first programme which offers a balance between structure and freedom.

> Structure to my view pertains to the way things are related. All forms, except perhaps the most chaotic have some structure, some set of coherent relationships among their components. Curicula are no exceptions. Curicula are plans, activities and materials that are intended to influence the learners experience. (1)

The course content includes drawing, two-dimensional studies, three-dimensional studies and support studies. The drawing is the backbone of the Junior Certificate: Art, Craft and Design. Drawing is the means by which visual research can be investigated for every discipline. Drawing involves recording, analytical observation and investigating appearances of visual stimuli. Personal expression occurs through developing and making a response to visual and tactile phenomena. Communication also plays an important role in Art education through drawing. (3)

In my opinion, the following methods should be recorded step by step as this is an integral part of the cognitive process; drawing the analysis of visual source, increasing in scale, manipulation of elements and appropriate and experimental use of media.

The two-dimensional studies can be subdivided, for example into painting, printing, photography and design. The three-dimensional studies in turn can also be sub-divided into categories, for example modelling, pottery, carving, construction. The options of the syllabus include a wide selection of disciplines which can be adapted to each individual school situation. Options include Batik, Book crafts, Calligraphy, Film-making, Embroidery, Mixed media Sculpture, Theatre design. These are a selection of some of the options available. There is a very broad range, some of which are quite basic, for example, calligraphy, where the minimum of materials would be required as opposed to others which would be more demanding on medium requirements. For example, theatre design, and film-making. What is important to emphasise is that all options are judged equally on their merit, not on the sophistication of the materials. This is vitally important as Art, Craft and Design budgets and facilities vary considerably from school to school. See Figure 4. Structure of the Junior Certificate: Art, Craft and Design Syllabus.

SUPPORT STUDIES

The Junior Certificate syllabus is supported by reference and experience other than the pupils own work. For example, it could be a visit to the Zoo, Natural History Museum, the National Gallery, a Puppet show or a film. From these experiences the pupils can collect visual stimuli by drawing. In certain cases drawing from observation may not be possible for film, but the film could trigger

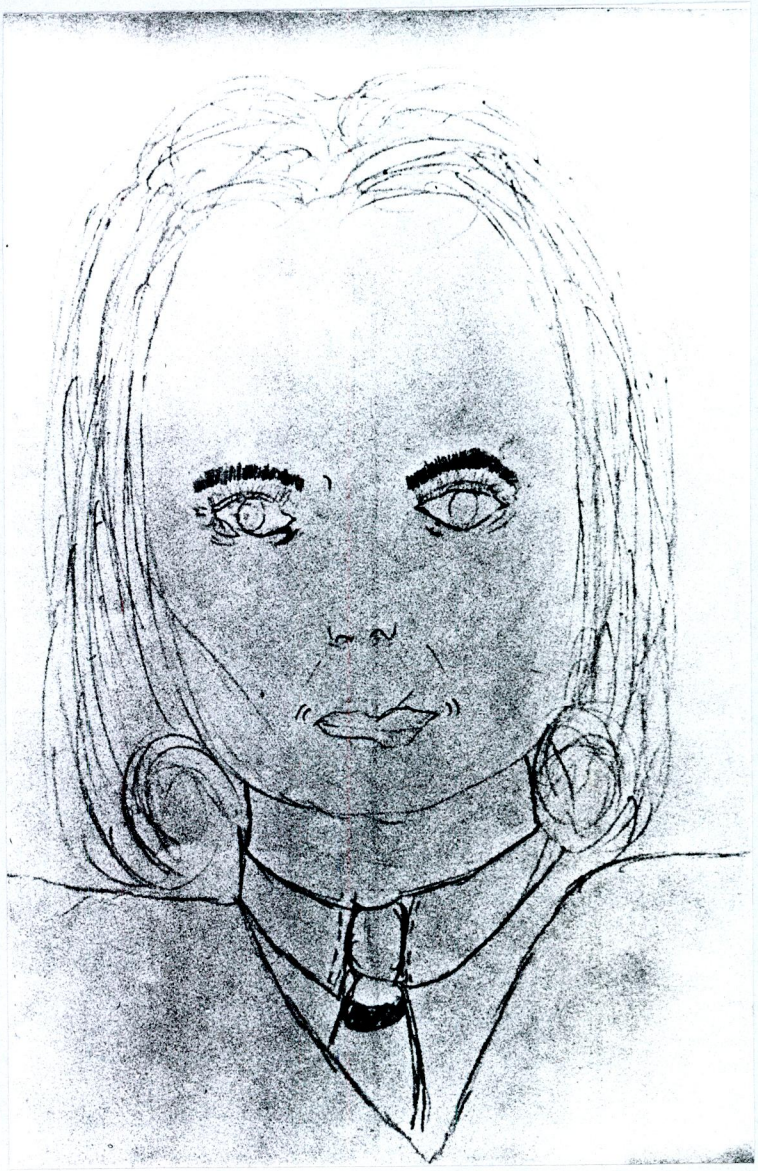

Figure 4. "Portrait". Proportional Study of Head. First Year pupil.

imaginative ideas for drawing, also memorabilia and posters could be collected and used for starting points.

The evaluation of works of art can be a great point of motivation for a learning experience. Through the critical process attention can be directed to :

- specific treatment and organisation of visual elements and form in specific works.
- general concept of form.
- significance of symbolic meanings being expressed. (3)

These qualities are discussed in relation to the historical and cultural context fo the artist / crafts person or designer. Without this the work is seen out of context, and can often appear to be meaningless to pupils. With this background of knowledge the pupils will be more open to recognise, understand and empathise with the work, and the artists expression, philosophy of life, inner feelings and his/her aspirations as human beings. (4)

Appropriate evaluation of paintings, design, sculptures, craft pieces is more important than the pedantic study of Art chronologically. If ideas and qualities of art history and design references are relevant to the pupils, this will lead to a greater understanding, therefore the interpretation and understanding of support studies will be much more effective.

COGNITIVE CONTENT WITHIN THE JUNIOR CERTIFICATE: ART, CRAFT AND DESIGN SYLLABUS.

"Educational aims and objectives, mean explicit formulae of ways in which pupils are expected to be changed by the educational process". (5)

Bloom divides cognition into two categories :

- Remembering or recalling knowledge.
- The more complex behaviours of the abilities and skills. (6)

THE NATURE OF ABILITIES AND SKILLS.

Pupils will acquire generalised techniques for dealing with new problems and new materials. Therefore, it is to be expected that when the student encounters a new problem or situation, s/he will select an appropriate technique for attacking it, and will bring to bear the necessary information, both facts and principles. This has been labelled critical thinking by some (Dewey) and problem solving by others. In the Taxonomy we have used the term intellectual abilities and skills. (7)

This quotation, I believe, is highly relevant to Art, Craft and Design in Secondary schools today. Particularly in relation to the Junior Certificate. Because the Junior Certificate: Art Syllabus is varied and structured in course content, subject matter has the scope to be explored in an individualistic way. The information through visual research can be unique to each individual pupil. The method by which each pupil manipulates visual stimuli, to create new two-dimensional

images or three-dimensional forms. For whatever discipline is also unique to each pupil. Every brief in the syllabus is a problem, no brief is the same, it is one course where possibilities of setting up problem situations for pupils are endless. The higher cognitive objectives are needed to tackle problems.

Application, Analysis and Synthesis.

> The visual arts have been put into a lower cognitive category in the Taxonomy. "The arts and skills emphasise the mental process of organising and reorganising material to achieve a particular purpose. (8)

I would disagree with this statement from the Taxonomy because I think it could only by applied to a dated copying of a representational subject as a complete end in itself. The new approach to the Art Craft and Design has realised the importance of critical thinking and problem solving that is below the surface of the realised work.

OBJECTIVES WITHIN THE ART, CRAFT AND DESIGN SYLLABUS

Objectives can be put into various cognitive categories, the majority of the objectives require the highest cognitive abilities to approach the problem solving situations presented in the Junior Certificate: Art Craft and Design Syllabus.

- To promote in the student an informed, enquiring and discriminating attitude to his or her environment and to help the student relate to the work in visual tactile and spatial terms.
- Give a personal response to an idea, experience or other stimulus.
- Work from imagination, memory and direct observation.

- Use drawing for observation, recording and analysis, as a means of thinking and for communication and expression.
- Use the core two-dimensional processes in making, manipulating and development images, using lettering, and combining lettering with image, in expressive and communicative roles.
- To use the three-dimensional processes of additive, subtractive and constructional form - making in expressive and functional modes.
- To use and understand the design elements. (9)

The objectives mentioned require the highest levels of cognition in order to resolve problems.

Lower cognitive aims and objectives include :

- the development in the student an understanding of art, craft and design in a variety of contexts - historical, cultural, economic, social and personal.
- Develops an awareness of the historical, social and economic role and value of art, craft and design and aspects of contemporary culture and mass media. (10)

This objective can be implemented by providing support studies in every lesson, the pupils in turn should be encouraged to research and collect their own support studies as they would have to in the project examination. Through collecting their own references they are making choices and decisions about what support studies are appropriate.

The following objectives provide the implements by which the pupil can tackle problems.

- The use and understanding of the art and design elements.
- The use of an appropriate vocabulary.

- The understanding of relevant scientific, mathematical and technological aspects of art, craft and design. (11)

Lower cognitive objectives are the building blocks on which the higher cognitive objectives can develop.

The other educational aims and objectives are effective and psychomotor, these are the more obvious objectives associated with art education in the past.

Effective: this objective develops the personality, the identity and self-esteem of the pupil. Art education plays a valuable role in the building of confidence, it can offer an open door to the academically weak pupil. What is also very important to realise is that, if a pupil has weak ability at art, and may not always produce an aesthetically pleasing art-work, the process of thinking, the ability to sustain a project from conception to realisation, and the critical appraisal of their own and peers work culminates a valuable educational situation for that pupil. An effective aim would be :

> To develop a sense of personal identity and self-esteem through practical achievements in the expressive and communicative concepts of art, craft and design. (12)

There is cognitive content in this aim, however it is the working through the art, craft and design process and emerging with a problem resolved that develops the personality of the pupil and self-esteem.

Psychomotor: This is the technical side of art, craft and design, there is physical skill involved

Use a variety of material, media, tools and equipment. It is emphasised in the art, craft and design syllabus that while materials and techniques are important in themselves, it must be emphasised that the teacher is not teaching printing with lino or painting with gouache, or building with clay per se, but is introducing the learner to these and other media as possible means for personal expression. Media and techniques should be regarded as vehicles for expression not content. (13)

So, with respect to technique in the class-room, it should not be taught in isolation, even at the exploratory stage. For example, if clay is being introduced - "exploring form" would be an art element appropriate for this introduction.

COGNITIVE DEVELOPMENT IN PRACTICE

> Goals provide the detailed specification for the construction and use of evaluative techniques. (14)

It is vital to have definite aims and objectives in the project sequence. While I have analysed the Junior Certificate: Art Craft and Design, I hasten to add that I would apply this structure of teaching at all levels, whether it is first year, third year, transition year or fifth year.

One aspect of the Junior Certificate structure which I haven't mentioned is the critical importance of preparatory work, the recording and analysis of the developing idea. For every discipline, this process is the proof of cognitive development as it reveals how the pupil has tackles problems and developed

ideas and made decisions from conception to realisation. This process uses the higher modes of cognition; application, analysis and synthesis. This preparatory work is critical at all levels to reveal an accurate view of the mental process behind the realised piece whether it is for a painting, design package or 3-dimensional construction.

Footnotes Chapter 3.

1. E. Eisner, "Structure and Magic in Disciplined Art Education", in Critical Studies in Art Education ed. D. Thistlewood (Longman, U.K.) p.18.

2. The National Council for Curriculum and Assessment, The Junior Certificate: Art, Craft and Design Guidelines for Teachers. An Roinn Oideachais, Dublin, 1989, p.3.

3. Ibid, . p. 6.

4. Ibid, . p 6.

5. B. Bloom, Taxonomy of Educational Objectives Volume I, The Cognitive domain, (Longman, London, 1956) p.36.

6. Ibid, . p.38.

7. Ibid, . p.39.

8. Ibid, . p.39.

The National Council for Curriculum and Assessment, An Roinn Oideachais, Dublin, 1989, p. 9.

10. Ibid, . p. 2.

11. Ibid, . p. 3.

12. Ibid, . p. 2.

13. Ibid, . p. 3.

14. Bloom, Taxonomy of Educational Objectives, p.27.

CHAPTER 4

COGNITIVE DEVELOPMENT IN PRACTICE

Analysis of Lesson Plans in Terms of Cognitive Objectives

Year: 1st Year Discipline: Collage Ability: Average to Good

LESSON 1

Theme: Portrait of a Friend

Source: Magazines, Memorabilia and collected Materials.

The first sequence I am going to discuss is planned with spiralling objectives, where art elements are explored at different stages of the sequence. Through exploration the elements are explored at different stages of the sequence. The elements to be encountered are: Colour, Texture, Shape and Pattern. The possibility of elements overlapping can occur at a later stage of the sequence.

Exact Aim: The exact aims of this sequence are to *promote decision-making* by the pupils. The *proportion* of the head will be introduced and pupils will, through research, explore concept of portrait of a friend.

Objective: To study the proportion of the head through drawing, concentrating on line, shape and proportion.

Procedure in Lesson 1.

After demonstration and introduction.

The first problem: Each pupil chooses a partner (if the pupils do not know one another, this can be more rewarding).

They will work in pairs drawing each others head front view only. In the introduction to this lesson it is emphasised that line only is used to study the head. This avoids unnecessary detail and confusion. The pupils then carry out an enlarged study of their partners head so that the head, neck and tops of shoulders fill the page. (The enlarged study is the basis for the collage). Because they do this in pastel, this defines *line* and *shape*. The increase in scale also allows the background to be an important *shape* in the composition.

COGNITIVE EVALUATION

The cognitive evaluation in this introductory lesson is in the lowest cognitive category. The pupil is using simple *knowledge* of proportion within the drawing of the head, and *comprehension* in the attempt to apply this knowledge in the drawing of the head.

The evidence of successful *knowledge* and *comprehension* is in the drawing. The drawing must have a good sense of proportion and well defined line and shape.

At the end of this problem by questioning, knowledge of the proportion was checked. A mini brain-storm then took place between partners, cognitive content was the simple collection of ideas for source, material, for example, magazine, memorabilia, newspapers.

I know that this lesson was successful by the evidence of proportion in the drawings, because the class was structured, and drawing approach emphasised *line* and *shape*, not detail, avoided confusion. Drawings had a good understanding of *proportion*, and the elements *line* and *shape* were obvious. See Figure 4. (p.20)

LESSON 2

Exact Aim: To create a classroom situation where the pupils work towards at least one of the following art elements; Colour, Texture, Pattern and Shape. They will discover these elements through their own experience.

Objective: To create a collage of the head using collected source material. The only element mentioned at this stage is *Shape*.

Procedure in Lesson 2.

It is important to emphasise that, in the introduction I emphasised two points. The first to be aware of Shape within and surrounding the head. (the element Shape was "extracted" through questioning). The second, to avoid selecting images in their own right, this avoided the work becoming too fragmented. This lesson was completely open to the pupils in what way they selected material for their collage. The motivation was high as they searched through source material. By the end of the class patterns of elements emerged in the work. It was obvious that pupils were making conscious decisions about at least one art element, ...*Colour*, *Texture, Shape* and *Pattern*. I wanted them to justify why they made those decisions, and, in order to do this thoroughly, it would take up a complete 80 minutes. So this evaluation was going to take place in the next class.

COGNITIVE EVALUATION

The pupils used the three cognitive categories of knowledge, comprehension and application. *Knowledge* was the basic grasping of problem, being able to follow

the introduction. Comprehension was the knowing how to carry out the problem of collage, to understand, to be aware of the *shape* of the composition and to understand what to avoid. At this lower level, some pupils with weak ability had to be reminded to be conscious of shape within the page and to avoid imagery. With so much imagery in source material, it is tempting for pupils to lose their direction, especially first-years. Application was very apparent in this lesson as most pupils began to select and explore particular art elements. They were consciously making decisions about particular elements. Colour, Texture, Shape and Pattern. See Figure 5.

Pupils with above average ability were at the higher cognitive stage of analysis. For example, if their element was colour, they were exploring particular types of colour combinations, for example, complementary and harmonious.

Figure 5. "Portrait". Emergence of Shape in Collage. First Year pupil.

LESSON 3

Exact Aim: Examine the art elements, Colour, Texture, Shape and Pattern.

Objective: The pupils would decide what element category their collage would fit into, and to reason why.

Procedure: I put up headings: *Colour*, *Shape* and *Pattern*, along one wall. Pupils had ten minutes to decide which category their work could fit into. I emphasised in the introduction that there may be two elements in one piece, in which case they could: put it into a category and talk about both elements. I wanted to keep my introduction to a minimum as I didn't want to influence pupils in their decision making.

Through questioning and allowing the pupils to justify why their work was a particular category, each pupils collage was analysed thoroughly by the pupil and their peers. This evaluation was highly successful. Out of 25 pupils, only one did not particularly fit into a category, but by the end of the session, this pupil was able to decide which direction she wanted to go in her collage.

COGNITIVE EVALUATION

Analysis and *evaluation* were the main cognitive categories in this sequence. Through pupils analysing their own work and placing it in the appropriate category, they had made an important decision. The fact that twenty four out of twenty five pupils all had definite art elements show that the level of *analysis* was high.

Pupils made the right decision. No pupil put their work in the wrong category. In some collage pieces it was obvious to see an overlap of elements, particularly with shape and pattern. Pupils whose element was texture tended to have a more harmonious approach to colour, which tended to emphasise the texture, rather that take away from the textural effect.

LESSON 4

Procedure for Lesson 4

I divided pupils accordingly by the elements they had chosen. I emphasised that it was very acceptable for elements to overlap, (by the end of the project some collage pieces, when analysed, had multiple elements in their structures). By working with groups, this enabled pupils to pool particular resources, as by now pupils had a good understanding and application of the elements, if pupils who were working on texture and they discovered some image that had a very high pattern content, e.g. printed textiles, type, wallpaper, they could donate this to the pattern group. Or, if a pupil who was working with colour found an image with a high content of texture, for example trees, grass or a wheat-field, they could donate this to the texture group. This method meant that every pupil was aware of all the elements, not just the ones they were working on. They also had sufficient information about their partner, so being separated did not cause a problem.

COGNITIVE EVALUATION

Analysis and synthesis were the main cognitive components in this class. Pupils had a very deliberate direction in their work and were selecting very specific material. The multiple selecting of art elements worked extremely well. I felt that every pupil had understood *colour*, *texture*, *pattern* and *shape*. Pupils were now very deliberately considering *composition* of their elements to *create* their individual collage.

The *evaluation* procedure involved allowing pupils to justify why they had made specific decisions through the selection and arrangement of material. Analysis of what was successful and what was less successful was critical at this point. It is a vital part of the cognitive process in art education to have the critical ability to justify why and how decisions have been made.

To evaluate further, through analysis of a selected group of images, pupils had to decide what elements were the most obvious in each image. It was obvious that there was at least two art elements in each collage at this stage. See Figure 6 and Figure 7.

Figure 6. "Portrait". Collage: Texture and Colour. First Year pupil.

Figure 7. "Portrait". Collage: Colour and Shape. First Year pupil.

Year: Transition Year Discipline: Print Design Ability: Mixed

Theme: Mardi Gras

Source: Fruit and Vegetables

The following sequence which I am going to discuss in terms of cognitive objectives is a design for a stencilled fabric print. The year is transition year. Although I have been referring mainly to the Junior Certificate: Art Craft and Design syllabus in this dissertation, I must emphasise that the same principles apply at all levels. The scope for the pupil to develop ideas from concept to realisation, the opportunity to explore a range of media and discipline and the importance of the sequential recording of preparatory work. All projects are supported by reference relevant to history of art.

The project I am going to discuss is for a mixed ability transition year. Some of the pupils have never done art before. The project was a design for fabric print (which will be made into a 2' x 2' cushion cover. The theme was "Mardi Gras" and the source was fruit and vegetables.

Aims: The aims of this project are to explore the design possibilities based on fruit and vegetables. To understand and actively experience the manipulation of drawing ideas necessary to create an original design. Pupils will explore composition and arrangement of shapes which will lead to fabric design. This

project aims to integrate with the Home Economics department as the fabric prints will be made into large 2' x 2' cushion covers.

LESSON 1

Objectives: To explore varieties of line and shape in the forms of fruit and vegetable. To analyse an area of the fruit or vegetable in colour, using oil pastels. To explore the tonal and colour variations in an area.

Procedure: Pupils select a fruit and vegetable and do a study of it, investigating its form and structure. Through investigative drawing pupils become more visually aware of their subject. In Figure 8 the pupil studied a lemon, segmented it and became interested in the form of the segments. Also, through enlarging detail, she became aware of the surface texture of the lemon.

These components were later abstracted and developed to become an integral part of her cushion cover design.

Cognitive Evaluation: Even though this was the first class of the sequence, cognitive content was high. Through analytical drawing pupils were able to identify the different elements in their selected fruit, in this class they were gathering information through their own research, certainly in this class. Pupils were performing at the analytical stage of cognition, where they were able to break the form of the fruit / vegetable down into its structure - figure 8.

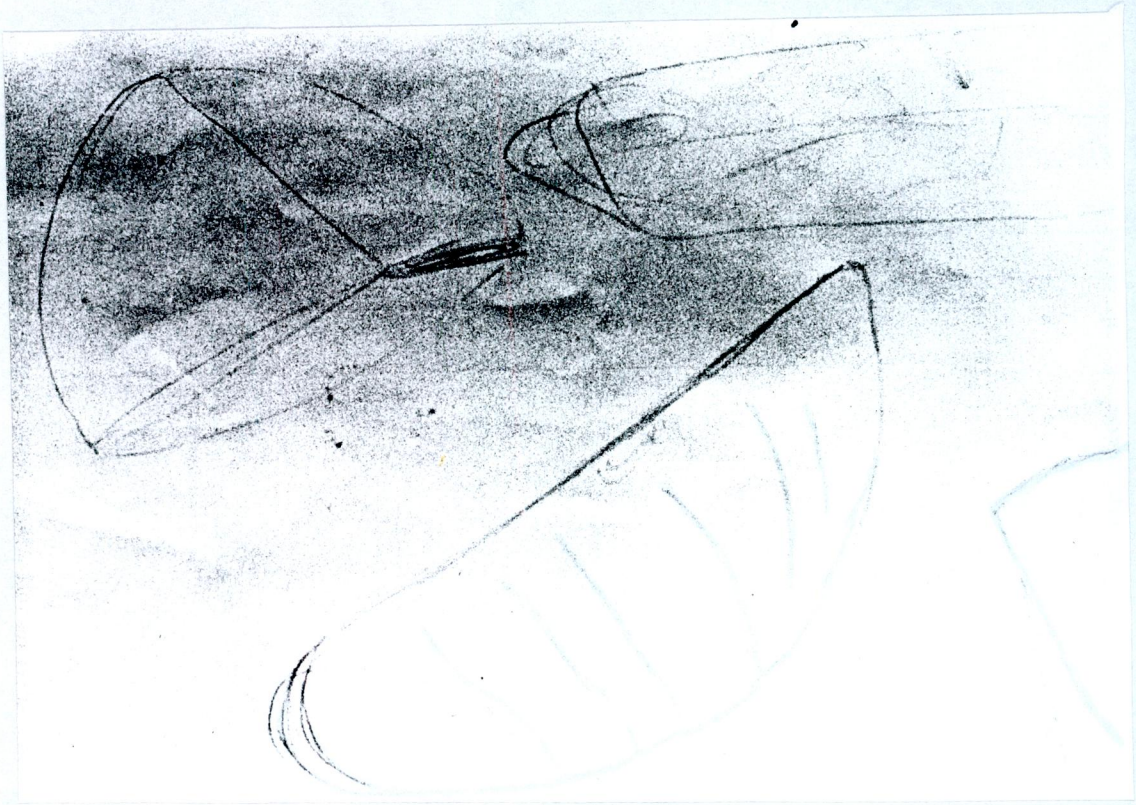

Figure 8. "Mardi Gras". Observational studies. Transition Year pupil.

LESSON 2

Objectives: This lesson will develop further the shapes through manipulation, through the use of the mirror image, increasing of scale, actively creating new patterns and compositions.

Procedure : If the pupils had simple transferred the information from the previous lesson into a design piece, though the result may be pleasing, the development and creation of ideas would be stunted. There would be very little decision making, problem solving or creative innovative input. So, to avoid this and to develop ideas further, pupils used a view-finder to select areas for exploration and a mirror image to further develop the shapes. The mirror image was only an aid for inspiration, pupils developed their patterns by drawing by taking elements (emphasised by the mirror image) and creating new compositions.

Cognitive Evaluation: Further analysis was prominent in this lesson, as pupils selected elements from their drawings, and developed them further into compositions. From one simple small sketch, four or five new ideas for manipulation of shape would emerge. This was an exciting class. See Figure 9.

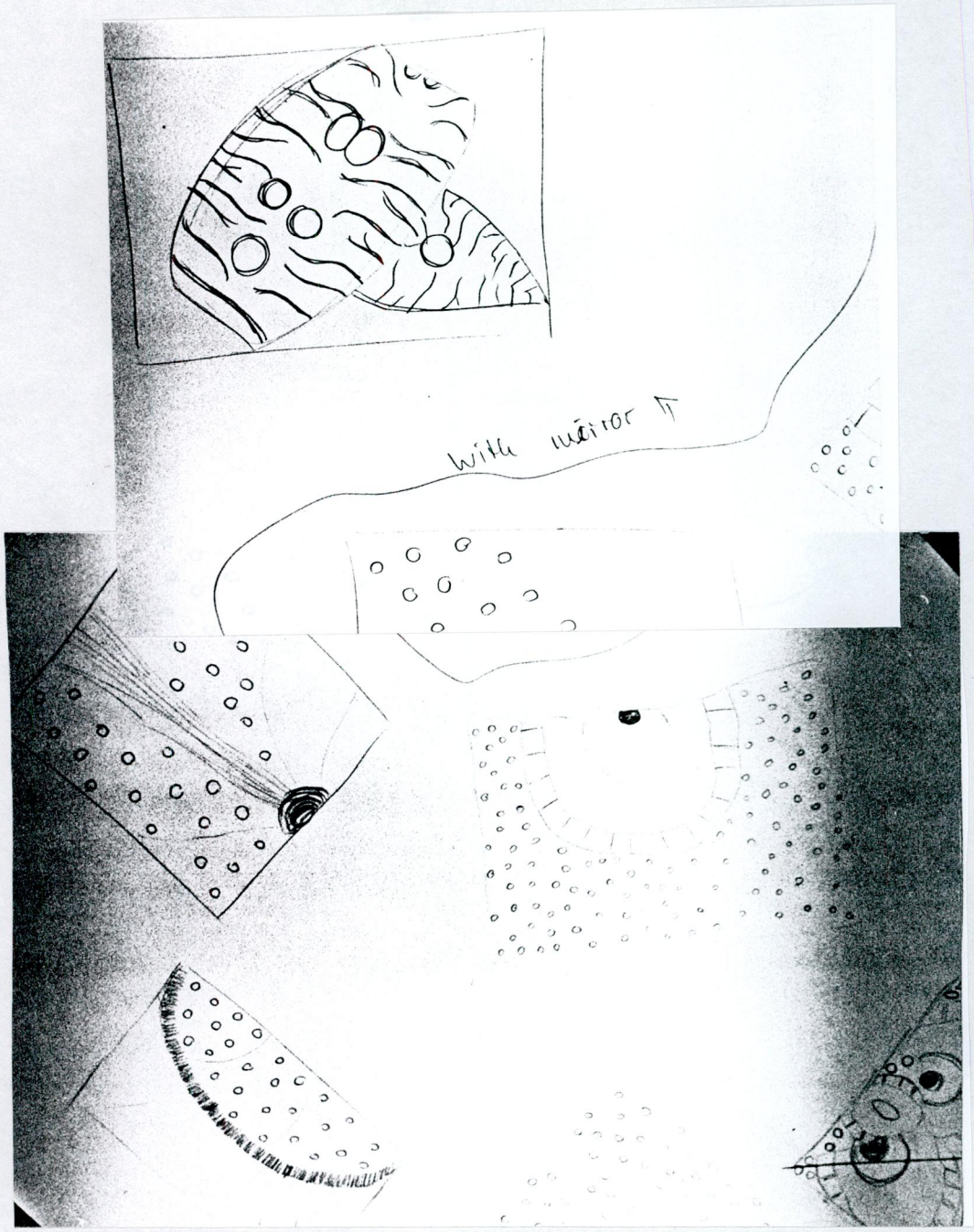

Figure 9. "Mardi Gras". The Arrangement and Manipulation of Shape. Transition Year pupil.

LESSON 3

Objectives: To introduce colour theory through printing a test piece and experimenting with overlapping colour. to encourage the arrangement and manipulation of shape through printing. Pupils will take just one element of shape from their drawings from lesson 2.

Procedure: Pupils select a shape from their previous drawings. They cut a stencil of it in card, and select two primary colours. They then proceed to print on a small, 8" x 10", test piece of calico. See Figure 10.

Cognitive Evaluation: This is a good example of how the lower cognitive levels are introduced half-way through the sequence instead of in an hierarchical order.

Knowledge, the understanding of the primary colours, comprehension understanding the result when they are mixed. In application, the pupils show their ability to arrange this shape / stencil print in an innovative way on their test piece, and through overlapping, reinforce their understanding of colour. It is emphasised at this stage that this method of printing is open to development through its process (as the stencil can be turned and overlapped in any direction).

Figure 10. "Mardi Gras". Manipulation through print. Transition Year pupil.

LESSON 4

Objectives: Pupils arrange selected composition to suit proportion of cushion cover. Pupils enlarge their ideas (drawings) and make a decision about the composing and arrangement of their design. Pupils also have to analyse their pattern further in terms of shape units as each shape will be printed individual through stencilling. See Figure 11.

Cognitive Evaluation: Synthesis takes place in the arrangement of the shapes into composition. The composition is then analysed further into the dividing the elements of shape into units for the purpose of making stencils.

The decisions of application of colour are based on the selected fruit or vegetable, colour can be analysed and exaggerated for design purposes. In Maxi's design she chose to tone down colour in the final printing process. See Figures 11 and 12.

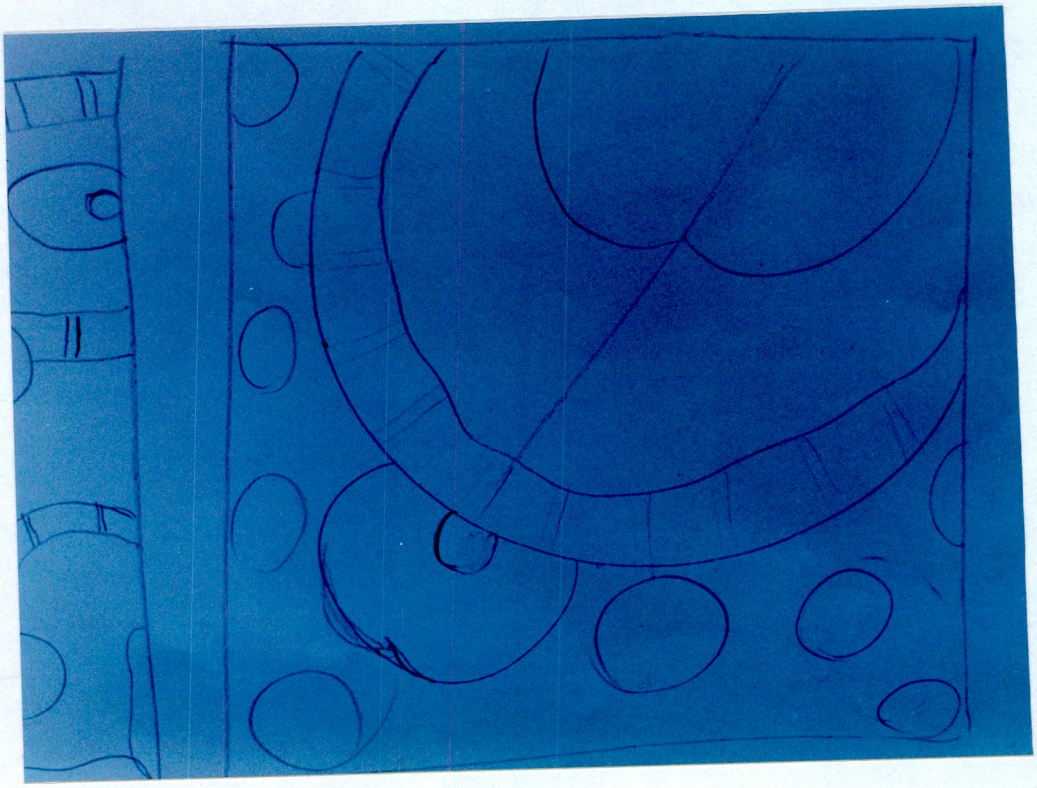

Figure 11. "Mardi Gras". Composition Possibilities for Print Design. Transition Year pupil.

Figure 12. "Mardi Gras". Colour Possibilities for Print Design. Transition Year pupil.

LESSON 5

Objectives: This class is the final stage of this sequence, the pupils begin to print their design, it is emphasised that even through the printing process ideas may develop further. Pupils make decisions about colour.

Procedure : Pupils cut stencils and proceed to print, referring to their design and documenting any changes evoked through the process.

Cognitive Evaluation : In this final piece, Maxi decided to print *less* than she had planned as her original design. See Figure 13.

This was a valid decision, as she felt that she had reached a resolved stage. This indicates the evaluation and decision making that is in constant flux in the process. The process can enhance the cognitive content in the class, particularly in this sequence as emphasis on evolving design is an important factor. This means that evaluation and decision making are an integral part of the sequence from the beginning of the sequence, particularly from Lesson 2 to the final stage of the sequence.

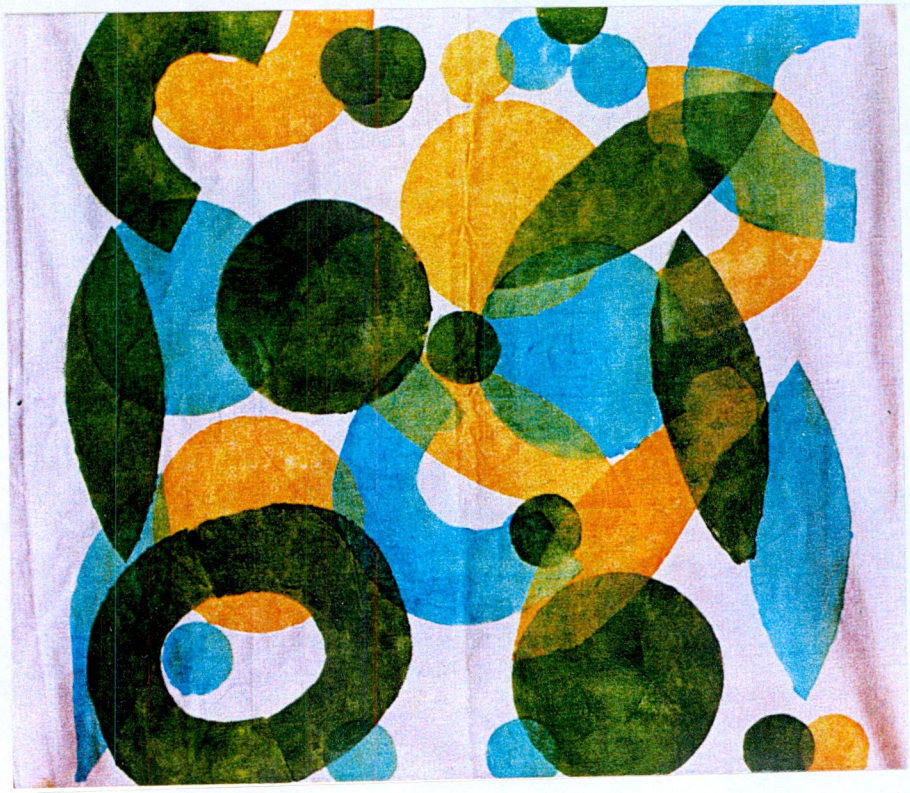

Figure 13. "Mardi Gras". Realisation of Design. Printed 2' x 2' Cushion Cover. Transition Year pupil.

CONCLUSIONS

Through analysis of the Junior Certificate: Art, Craft and Design syllabus, it is evident that cognitive objectives are the most dominant. I must emphasise that though I used the Junior Certificate: Art, Craft and Design syllabus, I would apply the same principle to all levels in secondary school. I have demonstrated this through the print design sequence, "Mardi Gras", which is for a mixed ability Transition Year.

Cognitive development can thrive in Art education, provided aims and objectives are specific. Through structured sequences, the situation can be created for decision making and problem solving. I have referred to Eisner in his essay on Structure and Magic in Discipline based on Art education. Freedom is possible through structure: structures do not have to be rigid but there must be a balance between structure and freedom; either extreme is not beneficial to Art education.

Through my analysis of lesson plans, it is obvious that in all disciplines of Art, Craft and Design, cognitive development comes to the fore. As in the first sequence discussed, "Portrait of a Friend" is Fine Art based. In the second sequence discussed, "Mardi Gras", it is design based.

This dissertation proves that Art education is not a vague occupational subject; Art education is an exciting arena for inventiveness, creativity, decision-making and problem solving.

APPENDICES

SPIRAL SEQUENCE

Year: 1st Year Discipline: Collage Ability: Average to Good

Theme: Portrait of a Friend

Source: Magazines, Memorabilia and Collected Materials.

This sequence of lesson plans are planned in a spiral manner, where concepts and art elements are explored at different stages of the sequence. Through experience, the pupil will explore the art elements.

Colour, *Texture*, *Shape* and *Pattern*. These elements may overlap, e.g. Shape and Pattern.

Aims: The exact aims of this sequence are to promote decision making by the pupils. I have created a free brief for Lesson 2 where, through working at the self-portrait or portrait of a friend, they will have explored or started to explore an art element. Each pupil will have at least one art element in their work.

At the end of Lesson 2, given that it is a mixed ability class, some pupils will have begun to explore at least one art element. Some pupils may not reach that stage. To counteract this, in Lesson 3, they will put their work into categories: colour, texture, shape, pattern. this will enable them to think about, and analyse their work and make a decision about the art element.

Lesson 1

Exact Aim: To introduce proportion of the head and promote understanding of proportion. to explain the concept of portrait of a friend/self portrait.

Objective: To draw the head, concentrating on line only, and understanding proportion.

Introduction: Today, a new project begins. It is a project where you will be exploring the portrait, but not in the traditional way. We will be working with the shape of the head and shoulders and collaging these areas with items; memorabilia you have collected. I will supply magazines, envelopes and wrapping paper. But it will be better if you also bring in your own items.

Motivation: show them a portrait of the head by renaissance artist Leonardo da Vinci, and explain proposition.

Demonstrate: How to approach drawing the head. Breaking down the drawing into simple stages.

Explain: The reason why they are doing this, as it is possible at this stage that they may have forgotten the concept of portraiture through collage. It is important to have an understanding of proportion of the head, so that they have a good basis for their collage.

Brief (problem) : Each pupil will pick a partner. They will do a line drawing of each others face and head (front view only), neck and shoulders. This will take 20 minutes each. (Life size).

The second problem will be to do a second study of their partner, but on a target scale so that their drawing fills the page. They will go over this with pastel, in order to define the shape of, and shapes within, the head. What is important in this drawing is to fill the page, so that the background becomes a shape.

Evaluate: Lay out all drawings.

Question to check that they remember proportion. (It is evident by the quality of their work whether they have understood proportion, but it is important to question to check their understanding.

Why did you have to enlarge the second drawing, and go over the lines with a thick pastel ? So that you can see the shapes of and within the head.

What is the other reason ? So that they will fill the whole page and that this makes you aware of the background as well.

* The class decides whether their work is self portrait or portrait of a friend. Then the class has a short brain-storm to tease out ideas of where they can collect memorabilia.

Homework: To collect and bring in any memorabilia.

Self-Evaluation:

My aim in this lesson was to instil a firm knowledge of proportion of the head. This is evident in their work. Motivation was good as pupils enjoyed working in pairs. Concentration was good.

Lesson 2

Exact Aim: To create a classroom situation where the pupils work toward at least one of the following art elements: Colour, texture, pattern, shape. They will discover these elements through their own exposure.

Objective: to create collage of the head using memorabilia.

Introduction: The class today is going to use magazines and memorabilia to explore the shape of the head. You will be using the large drawings you did in the 1st class.

Can anyone remember why we did a large drawing ? To emphasise shapes of the head.

Is there another reason ? To emphasise the background.

How many shapes are in the drawing of the head? Name them. Head, shoulders, neck, features and background.

These are the areas you will be exposing with collage.

Motivation: Visual aids: self-portrait collage.

Brain-storm: types of sources for memorabilia - subject matter etc.

Mini Interview: Between partners.

Brief/Problem: Pair up with your partner from the last day. Those who are doing self portraits can sit together so that ideas can knock off one another. conduct a mini interview, write down things you like, go through magazines and memorabilia and begin to collage onto portrait.

Evaluate: Collages were all displayed . It is evident at this stage that some pupils are beginning to emphasise different elements.

Question to find out what these elements are.

It is also evident that some pupils are simply cutting out images and sticking them on without exploring the elements. some are cutting out images and are using them in such a way as to define shape.

Question to find out what the art elements are.

Self-Evaluation: The only element I mentioned in the introduction was *shape*. Some pupils did begin to explore the elements through their collage, but generally it seemed that pupils were deliberately selecting imagery for its own sake. I felt that this inhibited the development of elements. Concentration was low as they were enjoying looking through the magazines and cutting out. this suggests that the class was too free and was leaning towards pure activity. However, on looking at the work at the end of the class, elements were emerging.

Before the pupils began to collage they had a mini interview with each other, this was a good point of motivation.

Lesson 3

Exact Aims: to create a situation where the pupils will be exploring the art elements; shape, colour, texture and pattern. Each pupil will explore at least one element.

Objective: To analyse the work and categorise it into elements. Then to develop the elements further through collage.

There are headings Colour, Texture, Shape and Pattern on the wall.

Introduction: Tell me what was happening with the collages. I want you all to put up your work under the headings. Look at your collage and decide which is the most obvious in your work. You may find that there are two elements in your work - that is fine - just put the collage into the main category. The pupils take about 10 minutes to do this.

Motivation: Putting their own work in to the category is rewarding for them.

Brief/Problem: The entire class is discussion-based. It is an evaluation from each individual about their work.

What is the most obvious element in your work ? Shape

Why is this ? I have deliberately chosen large areas to define with colour e.g. the eyes, the hair, the space around the head.

Self Evaluation: The complete class was discussion based. I had intended the discussion to last 40 minutes, but it was very involved and lasted almost the 80 minutes. It was very successful. In the beginning, the pupils put their work into the appropriate category; colour, shape, pattern, texture. Each pupil had to explain why they chose their category. I questioned them to say why they chose a specific category. Every pupil was very capable of explaining why, out of the whole class, there was only one pupil who was unsure. where areas of confusion arose, I got them to pick out areas in magazines where these elements were obvious. e.g. blue sky - colour; clouds - texture; wallpaper - pattern; buildings - shapes. (these are very simple examples). Pupils were able to cope with understanding multiple presence of elements in their work.

I was much more patient with my questioning and was confident that the pupils had made their own decision and had a good understanding of the elements. Visual aids were put up at the end of this session. The aids had an obvious presence of one particular element in each.

Concentration in class was excellent.

MARDI GRAS

Year: Transition Discipline: Print Design Ability: Mixed

Theme: "Mardi Gras"

Source: Fruit and Vegetables

Lesson 1

Exact Aims: The aims of this project are to explore the design possibilities based on fruit and vegetables. To understand and actively experience the manipulation of drawing ideas necessary to create an original design. Exploring compositional possibilities and arrangements of shapes and pattern which will lead to fabric printing. This project aims to integrate within the Home Economics department as the fabric prints will be made into large (2' x 2') cushion covers.

Objectives: to explore varieties of line and shape and qualities in the forms of fruit and vegetables; to analyse an area of the fruit or vegetable in colour, using pastels. Exploring the tonal and colour variations in one area.

Introduction: today we are beginning a new project. We are going to design and print a patter suitable for a fabric. The theme is "Mardi Gras" and the source for ideas is fruit and vegetables.

What do you understand by the term Observational Drawing ? It means that you are looking at the object you are drawing.

Exactly - there are so many lines, shapes, patterns, textures to be found by observing an actual piece of fruit or vegetable.

Support Studies: Show drawings by Rembrandt, Leonardo, Van Gogh to illustrate different qualities of line drawing.

Motivation: Actual selection of fruit and vegetables, in the classroom - being able to dissect fruit and vegetables. Demonstration of different weights and qualities of line and showing pupils how to use oil pastels - colour mixing.

Brief/Problem: Select a fruit or vegetable of your choice. Examine it, turn it around, draw it from different angles and then take/select a part of the object and do an enlarged study of it. (analytical). Then select an area and do a colour study.

Evaluation:

How do you think drawing from observation compares to drawing from memory ? You have much more information to draw from when you have the actual object in front of you.

What is the point of dissecting it ? To see the structure below the surface, this in turn can show new shapes and patterns.

What happens when you take a selected section and enlarge it ? You see new shapes and patterns.

Anything else ? What else can happen ? The object is changing in to something new, something new is created.

Self-Evaluation

- Generally the work was good from the pupils.
- Observational drawing was good. In the colour studies, some of the pupils tended to work very small. In future, I will emphasise to enlarge the scale when doing an analysis.
- They know to enlarge but seemed reluctant to do so. This could be avoided by giving minimum dimensions for analytical colour studies.
- In the general observation drawings, drawings tended to be tight, so I introduced a brief gesture drawing session and a mini evaluation. This loosened up the drawing, and by evaluation they understood the purpose of this. (Gesture drawings ramped from 30 seconds to 5 seconds).
- Motivation was good. Pupils enjoyed working from real fruit and vegetables and then dissecting them.
- My demonstration was basic but helped show the pupils who hadn't done art before how to approach the observational drawing.
- Concentration was good.

Lesson 2

Exact Aims: The aims are to explore the design possibilities based on fruit and vegetables. To understand and actively experience the manipulation of drawing ideas necessary to create an original design. Exploring compositional possibilities and arrangements of shapes and patter which will lead to fabric printing. this project aims to integrate with the Home economic department as the fabric prints will be made into large (2' x 2') cushion covers.

Objectives: To analyse and manipulate line and shape in drawings to create original design. to plan how colour / tonal variations of colour will be used.

Introduction: Today you are going to create a design for your piece of fabric. This fabric in turn will be made into a large cushion cover. the design will be on the front side, the back will be plain.

What kind of drawing were we doing last class ? Observational.

What did you discover when you enlarged details of the object ? New and exciting lines and shapes

Would you recognise where they came from ? Not really / Yes.

Why ? Is there anything that reminds you of the fruit you have selected ?
The colour and linear marks, pips etc.

Questioning in Introduction establishes knowledge that even though your creative design has moved away from the obvious shape/outline there may be still come characteristics that can suggest fruit or vegetable.

Brief/Problem : Take your drawings from last week. Look at areas you would like to explore. Create a mirror image of them in order to create an original design. You must have the real object in front of you as well, in case you want more visual information. Experiment and play around with ideas, be explorative, create an original design !

Remember, if you are examining a particular area through colour - enlarge it.

You may choose a new fruit or vegetable to combine with first choice.

Demonstration / Motivation: How to use view-finder. How to use tracing paper. How to use the mirror. Visual aids. material samples and Paul Klee painting.

Evaluation: Tell me how you arrived at this shape ? Does it look like the original fruit. If so, why ? If not, why not ? Question to enquire method of creating design whether using! Window mount, tracing paper, mirror, separately or combined.

Question to establish awareness of composition. Positive and negative space. Regular, irregular arrangement. Widely spaced, overlapping, etc.

Support studies : Paul Klee. Material samples.

Self Evaluation

- This was an exciting class. The procedure of using the view finder and then the mirror device was extremely successful. Pupils were transforming their original drawings into new and exciting shapes.
- The visual aids and demonstration worked well. The aids were appropriate and to the point. (Material samples and e.g. of Paul Klee). The demonstration was simple and clear. I am conscious with this mixed ability class to use a simple step by step approach in explanations and demonstrations.
- The questioning was successful. I waited and pushed for the answers I wanted.
- Concentration was excellent: some ideas for colour combinations emerged but I need to give a thorough introduction to colour in the next lesson.

Lesson 3

Exact Aims: The aims are to explore the design possibilities based on fruit and vegetables. to understand and actively experience the manipulation of drawing ideas necessary to create an original design. Exploring compositional possibilities and arrangement of shapes and pattern which will lead to fabric printing. this project aims to integrate with the Home Economics department as the fabric prints will be made into 2' x 2' cushion covers.

Objectives: to develop drawings from the previous lesson and to explore colour possibilities. To test print and investigate what happens with overlapping colour.

Introduction: Today we are going to explore colour. The primary colours, and how secondary and tertiary colours can be mixed.

What are the primary colours ? Why are these called primary colours ?

Question to check knowledge of colour mixing of secondary colours. Explain the term tertiary, even though pupils will only be using primary and secondary.

It is important at this stage of the project that you understand colour and can see what printed colour looks like on the calico. It is vital that you understand what happens when one colour or two are overlapped by another.

some of you have some colour experiments (just masked in with pastel). from the last class. I am going to select two colours and demonstrate how to mix them and explain the process of printing.

Brief/Problem: Take your drawings from last week. Select a shape from them, a stencil of that shape. This is the shape you will be using to print your test piece. You may cut two shapes as you will be using two colours. Choose two primary colours, (they don't have to be related to your design at this stage) and use these to print your stencil shapes on your test piece of calico. Turn the shapes around in different ways overlapping is vital in order to see what happens.

Demonstration: Show pupils how to cut stencil and mix the pigment with the medium. (This is important as these fabric dyes are very strong, also strict cleanliness of spoons is essential otherwise pigments quickly become dirty and unusable. Show pupils how to print without making unnecessary blobs. Cleanliness of sponges is vital.

Motivation: Mixing colour, seeing what happens during the printing process when colour is overlapped. Seeing a crisp clear print was satisfying and encouraging for pupils. visual aids: Material samples and support studies.

Evaluation: Question to check understanding of colour, primary and secondary.

What happens if you print a light colour over a dark colour ?

What happens if you print a dark colour over a light colour ?

Support Studies: Material printed, prepared with variations of colour and examples of clear and "fuzzy" printing. Also, showing what happens when too

much ink is applied. and when dirty sponges are used. (This is important, good technique is vital for a high quality standard of work, mistakes cannot be rectified in this method of printing.

Self Evaluation :

- There were two objective in the class, the colour theory and the printing of a shape. I believe the print technique is very important, and it is important, and it is important at this stage fro pupils to understand it and avoid sloppy procedure. This class was quite structured. After my demonstration, I put pupils into pairs. This worked well as they could help each other.
- At this point of the project, colour theory and technique were vital to explore as this might influence their design.
- The colour theory was simple and basic, as some pupils have not done art before.
- The technique was simple and immediate, through overlapping secondary colours were discovered.
- The technique had possibilities as pupils explored moving the stencil around in different ways on their test piece.
- The standard of work was good, although some pupils were conscious of creating a pattern with their shape, they still explored a the colour and technique.
- Concentration was good.

Lesson 4

Exact Aims: The aims are to explore the design possibilities based on fruit and vegetables. to understand and actively experience the manipulation of drawing ideas necessary to create an original design. Exploring compositional possibilities and arrangement of shapes and pattern which will lead to fabric printing. this project aims to integrate with the Home Economics department as the fabric prints will be made into 2' x 2' cushion covers.

Introduction: In the last class we explored the colour and the printing process.

What did we discover when two primary colours were overlapped, e.g. red and blue, ? That this created a new colour, purple.

What is the name of this type of colour ? A secondary colour.

Examine the work and discuss colour, good clear colour, and "mucky" colour. Explain why this can occur.

Today you are going to adapt your design to the proportion of the cushion covers, and decide how you will approach the stencils.

What was the most obvious point about this process ? That you can break the design into units.

Good, you will have much more freedom if you think of your design as a series of shapes instead of one whole unit.

Demonstration : The printing technique

Brief/Problem: Take your drawings and design from your design so that it is a square proportion. * Remember, if new ideas emerge during the printing process, this is good, but you must document them with drawings.

Analyse your design in terms of shape and colour and select and draw out shapes you are going to stencil.

Emphasise that this procedure may influence their design from now on.

Did you feel that this technique was quite free or restrictive ? It was free because you can put the stencil down wherever you like. You can turn it in any direction, overlap it, and select any colour.

What do you think your approach to colour will be ? What can happen if you choose too many colours ? It can become confusing.

How can you avoid this ? By selecting related colours, e.g. yellow, blue and green. Just keeping the colour choice restricted will give a clearer design.

What else can you do with the colour based on your source drawings ? You can exaggerate it.

How ? Well, if you have a shaded area, which could have a blue/brown tone, you could exaggerate this into purple. Or, if you have a bright area, you could exaggerate this into a strong yellow.

Question to reinforce understanding of complimentary colours, warm and cool colours.

Motivation : Adapting their design to the stencils can inspire a new way of looking at their design. this is a good point of motivation.

Evaluation: *Why does the design have to be broken into units ?* You can manipulate the shapes and arrange them in new ways. You can change your design through the process.

How have you approached colour ? Colour is based on the source drawings.

Have you changed the colour ? Some colours have been exaggerated. some colours are tonal variations, e.g. light, medium and dark green. Some colours are of the same family, e.g. yellow, blue and green.

What have you to watch out for in this process, when printing? The effect of light being printed over dark, and the effect of dark over light. That is an important point to remember.

What else must you take into consideration when printing ? The mixing of colour through overlapping.

Support Studies: Visual aids by the teacher.

Self Evaluation: The aim of this lesson was to move towards breaking the design into units for printing. Some pupils found this a difficult problem. I resolved this through repeating the demonstration to the relevant individuals.

I felt that pupils were concentrating very well while resolving this problem.

Lesson 5

Exact Aims : The aims are to explore the design possibilities based on fruit and vegetables. to understand and actively experience the manipulation of drawing ideas necessary to create an original design. Exploring compositional possibilities and arrangement of shapes and pattern which will lead to fabric printing. this project aims to integrate with the Home Economics department as the fabric prints will be made into 2' x 2' cushion covers.

Objectives: This class is the synthesis of all previous lessons. The design is ready to be printed. The pupils will actually print their design today. The possibility of innovation is still present in this sequence. There will be a sewing machine present to sew the covers.

Introduction : Today we are going to print the cushion covers. Your method of printing is free in that you can change position and colour of the shapes with ease.

Demonstration: Printing technique was shown to ensure that there would be no errors.

Materials Needed : Pigment, Medium. Card and scissors. Calico cut 2' x 2'.

Brief/Problem : To print the final cover and to document any development of design.

Take a sheet of card, draw your shapes onto the card and divide it accordingly.

Mini-Demonstration, show pupils how this can be done.

You will then select your pigments, mix them and begin to print on your calico. Be aware of what happens when overlapping occurs. You can always experiment on a test piece if you are not sure. These inks dry quite quickly but make sure they are completely dry before printing over them.

Motivation: The printing of the design, satisfaction of seeing the colours emerge.

Evaluation: the evaluation will take place in lesson 6 which will consist of completing the covers; printing and sewing and having an in-depth evaluation of the work.

Self-Evaluation: This lesson went very well. Having explained and practised the technique in Lesson 3 made this class run smoothly. Pupils did not have to worry about techniques and were able to concentrate on printing the design. Some pupils completed the covers. Designs developed further during this process. Pupils recorded this through drawing. Concentration was very good.

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